

TACTICAL ECONOMICS: THE U.S. ARMY'S TACTICAL
CONTRIBUTION TO ECONOMIC DEVELOPMENT

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
Security and Conflict Studies

by

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| REPORT DOCUMENTATION PAGE | | | | Form Approved OMB No. 0704-0188 | |
|--|--------------------|-----------------------------------|----------------------------|---|---------------------------------------|
| Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS. | | | | | |
| 1. REPORT DATE (DD-MM-YYYY) 08-06-2012 | | 2. REPORT TYPE Master's Thesis | | 3. DATES COVERED (From - To) AUG 2011 – JUN 2012 | |
| 4. TITLE AND SUBTITLE Tactical Economics: The U.S. Army's Tactical Contribution to Economic Development | | | | 5a. CONTRACT NUMBER | |
| | | | | 5b. GRANT NUMBER | |
| | | | | 5c. PROGRAM ELEMENT NUMBER | |
| 6. AUTHOR(S) Major Iven T. Sugai | | | | 5d. PROJECT NUMBER | |
| | | | | 5e. TASK NUMBER | |
| | | | | 5f. WORK UNIT NUMBER | |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301 | | | | 8. PERFORMING ORG REPORT NUMBER | |
| 9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) | | | | 10. SPONSOR/MONITOR'S ACRONYM(S) | |
| | | | | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) | |
| 12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited | | | | | |
| 13. SUPPLEMENTARY NOTES | | | | | |
| 14. ABSTRACT Scholars and military professionals agree on the importance of economic development during stability operations. They also recognize its complexity. Current policy mandates Army participation in economic development, but how does the U.S. Army contribute effectively when it lacks expertise to do so? This study, drawn from the work of seven influential scholars and other government agencies with expertise in economic development, develops a framework military professionals may use to contribute effectively to economic development. By combining the work of these scholars and other government agencies, the framework is integrated into the Army design methodology in order to operationalize it. The study is significant insofar as it (1) develops a framework that soldiers may use to contribute to economic development without the required expertise, (2) informs commanders on how to visualize, describe, and direct economic development operations more effectively, and (3) extends situational understanding to different echelons and levels of war. | | | | | |
| 15. SUBJECT TERMS Economics, Economic Development, International Aid, Reconstruction, Stability Operations, Counterinsurgency, COIN | | | | | |
| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
| a. REPORT (U) | b. ABSTRACT (U) | c. THIS PAGE (U) | | | 19b. PHONE NUMBER (include area code) |
| | | | (U) | 78 | |

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

TACTICAL ECONOMICS: THE ARMY'S TACTICAL CONTRIBUTION TO ECONOMIC DEVELOPMENT, by Major Iven T. Sugai, 78 pages.

Scholars and military professionals agree on the importance of economic development during stability operations. They also recognize its complexity. Current policy mandates Army participation in economic development, but how does the U.S. Army contribute effectively when it lacks expertise to do so? This study, drawn from the work of seven influential scholars and other government agencies with expertise in economic development, develops a framework military professionals may use to contribute effectively to economic development. By combining the work of these scholars and other government agencies, framework is integrated into the Army design methodology to operationalize it. The study is significant insofar as it (1) develops a framework that soldiers may use to contribute to economic development without the required expertise, (2) informs commanders on how to visualize, describe, and direct economic development operations more effectively, and (3) extends situational understanding to different echelons and levels of war.

ACKNOWLEDGMENTS

This thesis would not have been possible if not for help and support of some truly remarkable people for whom I would like to give particular mention here.

First and foremost, I would like thank my lovely wife Courtney for her love, support, understanding, and encouragement, especially on those days where I had to place myself in isolation in order to meet certain milestones. You have been my compass as I navigated a sea of ideas and emotions.

I owe a debt of gratitude to LTC Celestino Perez, my committee chairman, for his insight, mentorship, and confidence that I could see this study through. You have opened my eyes to new approaches to tackling seemingly age-old problems, and have given me a greater appreciation for scholarship. I would also like to thank members of my committee, Dr. David Anderson and Mr. James Cricks, for your patience, invaluable advice, and input to this study.

Last, but by no means least, I must dedicate this work to my sons Kawena, Kanoa, and my third son for whom I am yet to meet, whose love and affection served as a constant reminder of why I chose the profession of arms, and its importance in preserving the freedoms of this great country so that they may enjoy a future of peace and prosperity.

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ACRONYMS

| | |
|-----------|--|
| CERP | Commander's Emergency Relief Program |
| CSO | Bureau of Conflict and Stabilizations (Formerly S/CRS) |
| DA | Decisive Action |
| DOC | Department of Commerce |
| DOD | Department of Defense |
| DODD | Department of Defense Directive |
| DODI | Department of Defense Instruction |
| DOS | Department of State |
| DP | Decisive Points |
| DSF | District Stability Framework |
| FM | Field Manual |
| IAD | Institutional Analysis and Development [Framework] |
| ICAF | Interagency Conflict Assessment Framework |
| JP | Joint Publication |
| METT-TC | Mission, Enemy, Terrain, Time, Troops, and Civilian considerations |
| NGO | Nongovernment Organization |
| PI | Price Index |
| PMESII-PT | Political, Military, Economic, Social, Infrastructure, Information, Physical environment, and Time |
| S/CRS | Office of the Coordinator for Reconstruction and Stability |
| TREAS | U.S. Treasury Department |
| UA | Unified Action |
| ULO | Unified Land Operations |

| | |
|-------|--|
| US | United States |
| USAID | United States Agency for International Development |
| USG | United States Government |
| WoG | Whole of Government |

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CHAPTER 1

INTRODUCTION

This study, drawn from the work of seven influential scholars and other government agencies with expertise in economic development, develops a framework military professionals may use to contribute effectively to economic development. By combining the work of these scholars and other government agencies, the study integrates this framework into Army design methodology to operationalize the framework.

This chapter begins with an overview and background, followed by the problem statement. Subsequently, the chapter leads into the purpose statement and accompanying primary secondary, and tertiary research questions that aided this study. Additionally, included in this chapter is a brief discussion of the research methodology and assumptions that were made in order to continue with the study. The chapter concludes with the significance of the research, key definitions, delimitations, and limitations.

Background and Context

I am concerned at the present economic situation in North Africa and its possible influence on military operations and urge that steps to alleviate it shall be initiated immediately. I cannot over emphasize adverse political effect of not meeting minimum needs of the civilian population.¹

The U.S. Army has a long history of conducting economic development. After World War II, soldiers in the war-torn Italy struggled to stabilize the economy after the German Army retreated.² Soldiers established a price index to monitor and control hyperinflation. Soldiers struggled to fight off black markets, price gouging merchants, sending some to prison. While the effectiveness of the Army's economic development is

contestable, there is a history of the Army executing actions in economic development out of necessity.

The U.S. Army Center of Military History highlighted civilian agencies' (with specializations in governance and economic development) inability to support reconstruction effectively at the end of World War II.³ More recently, investigations conducted by the Special Inspector General for Iraq Reconstruction (SIGIR), indicated that organizations such as the United States Agency for International Aid (USAID)—by no fault of their own—were ill prepared for postwar reconstruction during Operation Iraq Freedom in 2003.⁴ The investigation concluded that the agency was left out of the planning and did not have the capacity or manpower to be effective.⁵ This forced military commanders to execute economic development on their own.

The Commander's Emergency Relief Fund (CERP) was developed from operational need in Iraq and Afghanistan to enable the commander to execute rapid, high payoff economic development initiatives, local purchases, condolence payments, or battle damage repair. CERP funds thus provided commanders with a variety of options. On one hand, CERP funds were used in Baghdad to fill in a lake and turn the area into a community park. However, two years later, the park was in disrepair and no longer in use.⁶ On the other hand, CERP projects that were used to create employment opportunities at the district level for military-aged males were largely considered successful because they provided an alternative to joining the insurgency.⁷ CERP's popularity and wide range of use would draw into question its efficiency and effectiveness. Scholars and professionals alike, have varying views on economic

development and its problems. Depending on how they view the environment, they posit a wide range of solutions on how to solve them.

Problem

Determining how to conduct economic development (including but not limited to programs such as CERP) effectively requires a deep understanding and experience in economics, which is something the Army does not possess. Kori Schake, research fellow at the Hoover Institute and professor at the U.S. Military Academy argues that the Army does not have adequate expertise execute economic development effectively. Schake argues that the Army needs to focus on its war-fighting tasks, and an agency like USAID needs to improve its effectiveness in development while also building capacity.⁸ Additionally, Frederick Kagan, a resident scholar at the American Enterprise Institute and former U.S. Military Academy professor, further ascribes the Army's lack of trained staff, career fields, specialized units, and doctrine providing specific guidelines to economic development.⁹ Regardless of the Army's ability to conduct economic development, both necessity and policy drive it to execute economic development.

The 2005 *National Security Policy Directive-44* (NSPD-44) directs the Secretary of State to lead and coordinate USG efforts vis-à-vis stabilization and reconstruction (including economic development via USAID).¹⁰ Subsequently, the Department of Defense issued DOD Instruction (DODI) 3000.05 in 2009 that clearly delineates the Army's role in contributing to economic development.¹¹ DODI 3000.05 specifies that the military (the Army) lead stability activities (including economic development) until such a time that it may transition responsibility to other USG agencies.¹² The DODI diffuses the arguments as to whether or not the Army participates in economic development.

Doctrine ill-defines how the Army fulfills its mandated role in economic development set forth in DODI 3000.05. FM 3-0, *Operations*, emphasizes the Army's role in conflict and the importance of economics, but fails to give a specific framework or model the Army may use for contributing to economic development.¹³ FM 3-07, *Stability Operations*, informs military professionals in more detail about economic development. It attempts to introduce economic development concepts of other government agencies the Army is expected to cooperate with such as the International Conflict and Assessment Framework (ICAF). However, like FM 3-0, it fails to offer specifics on how to effectively contribute to economic development.¹⁴

Purpose, Significance, and Research Questions

Scholars and professionals offer suggestions for the Army to execute economic development given its current capabilities. Anderson and Wallen suggest that military units should collect economic intelligence to assist in identifying opportunities to initiate or execute needed development.¹⁵ Peterson, Professor of Economics at the U.S. Military Academy, supports Anderson and Wallen's claim while also countering Shake's claim, arguing that in early stages of a counterinsurgency, military units are best equipped and positioned to gather local information to contribute to economic development.¹⁶ Anderson et al. and Peterson's claims buttress the purpose of this study.

This study, drawn from the work of seven influential scholars and other government agencies with expertise in economic development, develops a framework military professionals may use to contribute effectively to economic development. By combining the work of these scholars and other government agencies, the study is used to integrate this framework into Army design methodology to operationalize the framework.

This study is significant insofar as it (1) develops a framework that soldiers may use to contribute to economic development without the required expertise, (2) informs commanders on how to visualize, describe, and direct economic operations more effectively, and (3) extends situational awareness to different echelons and levels of war.

To achieve this study's purpose, the following research question and corresponding secondary and tertiary research questions were addressed:

1. Primary research question: How can the Army effectively contribute to economic development?
2. Secondary research question: Is there a framework—a list of variables—that soldiers may use with little to no economic development expertise while also providing the commander with an initial understanding of the economy?
3. Tertiary research question: How do military professionals integrate these variables and framework into operations?

Assumptions

The following assumptions are made throughout the study. First, the study assumes that security is constant throughout the span of military operations and that the Army maintains that requirement. Secondly, the Army will continue to be the de facto executor of economic development. The study does not consider probability of the Army conducting economic development; rather, the assumption is that the Army “will” conduct economic development.

Definitions

The following terms are used throughout this study.

Framework: A scheme or outline for facilitating the organization of analysis, diagnosis, and prescription for understanding.¹⁷

Interagency: United States Government agencies and departments, including the Department of Defense

Leader Engagement (or Key Leader Engagement): A meeting between an Army leader or commander and a head of an organization or group of people (e.g., tribal elder, sheikh, or city mayor) to advance objectives and establish productive relationships.¹⁸

METT-TC: A memory aid used to group variables that may have an effect on a mission. The memory aid represents: mission, enemy, terrain and weather, troops and support available, time available, civil considerations.¹⁹

Mission Command: The US Army's preferred method for executing command and control activities. Mission command involves subordinate commanders operating in a decentralized manner through mission orders. A requires of subordinate leaders to execute mission command is that they be "disciplined, timely, aggressive, and independent while accomplishing missions within the commander's intent to be successful."²⁰

Operational Environment: A "composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander."²¹

Operational Variables: Are broad aspects of the environment, both military and nonmilitary, that differ from one operational area to another and affect campaigns and major operations. Operational variables are used to describe a combination of military aspects of an operational environment and a population's influence on it.²²

PMESII-PT: A memory aid used to describe operational variables and includes political, military, economic, social, information, infrastructure, physical environment, and time factors.²³

Situational Understanding: “The product of applying analysis and judgment to relevant information to determine the relationships among the mission variables to facilitate decision making.”²⁴

Tactical or Tactical Operations: For the purpose of this study, operations conducted by Army units at the Brigade level or below.

Whole-of-Government approach: The involvement of multiple USG organizations that work in coordination with each other to accomplish a common goal or objective.

Delimitations

The results of this study do not prescribe economic development as a panacea for solving complex problems in areas of conflict. Moreover, the study does not suggest a particular method, model, or scholarly supposition for economic development. Rather, the study is used to posit that economic development is an iterative process, where any particular method, model, or scholarly supposition for economic development may be executed, based on a commander’s understanding of the situation and the operational environment, considering expert advice, or working with or through organizations more capable of development. The study does not recommend a template that may be applied directly over a particular area of operations such as the use of state-run or private-run businesses. Furthermore, the study’s implications span beyond the current counterinsurgency efforts in Iraq or Afghanistan and is detailed enough for application in conflict of the foreseeable future.

Limitations

This study is limited by its use of unclassified, open-source documents due to ongoing operations in both Afghanistan and Iraq. Additionally, a plethora of economic development agencies exist. However, for the purpose of this study and time constraints, USG-sponsored aid organizations were primarily considered since they are generally larger and most influential in areas of conflict where the U.S. Army operates.

Chapter 2 examines relevant literature, with regard to policy and Army doctrine, influential scholars, and existing frameworks, methodologies, and theories useful in economic development. The literature review is followed by chapter 3, which discusses the methodology used for this study, and is followed by chapter 4, the Analysis. The study concludes with chapter 5, which draws conclusions and provides recommendation for implementation of findings and future research.

¹Harry Lewis Coles, Albert Katz Weinberg, and Center of Military History, *Civil Affairs: Soldiers Become Governors* (Washington, DC: Center of Military History, 2004).

²*Ibid.*, 340.

³*Ibid.*, 51.

⁴Reconstruction United States Office of the Special Inspector General for Iraq, *Hard Lessons: The Iraq Reconstruction Experience* (Washington, DC, 2009).

⁵*Ibid.*, 18.

⁶Ernesto Londoo, “Barren Iraqi Park Attests to U.S. Program’s Flaws,” *Washington Post*, 1 March 2011, www.washingtonpost.com/wp-dyn/content/story/2011/01/03/ST2011010300196.html?sid=ST2011010300196 (accessed 20 March 2012).

⁷Fredrick W. Kagan, “Post-Conflict Planning and Execution: Progress, Challenges, and a Framework for Moving Forward,” in *Summit on Entrepreneurship and*

Expeditionary Economics, eds. Carl J. Schramm and Robert Ulin (Kansas City, MO: Kauffman Foundation, 2010), 178-181.

⁸Kori Schake, “Operationalizing Economics,” in *Summit on Entrepreneurship and Expeditionary Economics*, eds. Carl J. Schramm and Robert Ulin (Kansas City, MO: Kauffman Foundation, 2010).

⁹Kagan., 178.

¹⁰Office of the President of the United States, *National Security Presidential Directive (NSPD)-44*2005.

¹¹Department of Defense, Department of Defense Instruction 3000.05, *Stability Operations* (Washington, DC: Government Printing Office, 2009).

¹²*Ibid.*, 2.

¹³Department of the Army, FM 3-0, *Operations* (Washington, DC: Government Printing Office, 2011).

¹⁴Department of the Army, FM 3-07, *Stability Operations* (Washington, DC: Government Printing Office, 2008).

¹⁵David A. Anderson and Andrew Wallen, “Preparing for Economics in Stability Operations,” *Military Review* (March-April 2008).

¹⁶Jeffrey D. Peterson, “Towards a Post-Conflict Economic Development Doctrine,” in *Summit on Entrepreneurship and Expeditionary Economics* (Kansas City, MO: Kauffman Foundation, 2010).

¹⁷Clark C. Gibson, et al., *The Samaritan’s Dilemma: The Political Economy of Development Aid* (Oxford: Oxford University Press, 2005), 92-98.

¹⁸Jeanne F. Hull, *Iraq: Strategic Reconciliation, Targeting, and Key Leader Engagment* (Carlisle, PA: Strategic Studies Institute, United States Army War College, 2009).

¹⁹Department of the Army, FM 3-0, *Operations*, 1-1.

²⁰Department of the Army, FM 5-0, *The Operations Process* (Washington, DC: Government Printing Office, 2010).

²¹Department of the Army, FM 3-0, *Operations*, 1-1.

²²*Ibid.*, 1-5.

²³Ibid.

²⁴Ibid., 6-13.

CHAPTER 2

LITERATURE REVIEW

This literature review examines three bodies of literature that laid the foundation for the study and served as segue for the analysis. The first body of literature is described in Section 1: Relevant Policy and Doctrine. Section 1 examines current National policy and Army doctrine as it applies to economic development. Section 2, Influential Scholars, examines the current economic development arguments. Section 3, Frameworks, Methodologies, and Theories, provide a background on the contexts and approach to economic development.

Section 1: Relevant Policy and Doctrine

The Policy and Doctrine body of literature begins with a review of current National policy and Army Field Manuals, specifically Field Manual (FM) 3-0, *Operations*, FM 5-0, *The Operations Process*, and FM 3-07, *Stability Operations*. This body of literature discusses the U.S. strategic direction with respect to economic development and the Army's role in pursuing that strategy. This role in economic development can be traced back to the era of World War II. During operations in northern Africa, General Dwight D. Eisenhower expressed his concerns over the economic situation, its possible effect on military operations, and political ramifications of not tending to the needs of the local population.¹ Regardless of the emphasis by the General, issues vis-à-vis economic development and stability continued to plague military operations until and beyond the war's end.

After the war, in an effort to move Japan towards a stable democracy, commanders encountered an uphill battle, implementing effective development working through uncooperative bureaucratic systems. In Japan, General Douglas MacArthur was faced with selling the Japanese people who lived in harsh economic conditions on the ideals of democracy.² For MacArthur, understanding of the dynamics of economics, security, and politics paid dividends and allowed him to work effectively through bureaucratic channels to obtain what he needed to provide for the population.³ Civilian agencies, which were supposed to lead the effort, were incapable of effectively supporting reconstruction and economic revitalization, leaving the Army to execute the complex processes on its own.⁴

Policies and doctrine today account for lessons learned from World War II. Current policy is written to increase the capacity of civilian agencies for stability operations and increase interagency cooperation. In 2005, the President of the United States issued *National Security Policy Directive 44* (NSPD-44). NSPD-44, much of which was based on lessons learned from ongoing operations in Iraq and Afghanistan, delineated responsibilities for reconstruction between government agencies.⁵ The policy formally established the Department of State's Office of the Coordinator for Stability and Reconstruction (recently changed to Bureau of Conflict and Stabilization Operations, CSO) and the Policy Coordination Committee for Stability and Reconstruction.⁶ While the creation of both offices was supposed to improve interagency cooperation and capacity, Anderson and Wallen argue that NSPD-44 falls short of establishing conditions for a unity of command for all government agencies.⁷ To expand on and add fidelity to

NSPD-44, the Department of Defense (DOD) subsequently issued DOD Directive 3000.05 (DODD 3000.05).

DOD initially implemented the presidential directive with the publication of DODD 3000.05 and DODI 3000.05 in 2009. The directives echoed NSPD-44 insofar as to direct increased interagency cooperation between DOD offices and other government agencies and further detailed roles within the DOD vis-à-vis Stability Operations.⁸ Furthermore, the DODD and DODI 3000.05 established Stability Operations as a core military task. Although a novel concept, the policy stirred argument within scholars and military professionals.

One such argument is that the military should be not involved in some aspects of stability operations, particularly, economic development. Schake argued that the military's capability to conduct economic development should not be increased.⁹ Instead, more funding and resources should be allocated to agencies such as USAID to be more effective at its core task—development.¹⁰ Conversely, Kagan highlighted that the military (as it is currently organized, trained, manned, and equipped) does not have the expertise required for effective economic development. However, DODD 3000.05 accounts for such argument insofar that it includes the caveat: “Many stability operations tasks are best performed by indigenous, foreign, or US civilian professionals. Nonetheless, US military forces shall be prepared to perform all tasks necessary to establish or maintain order when civilians cannot do so.”¹¹ Moreover, the directive is clear. Regardless of debate, the military will indeed participate in economic development. In a broad sense The DODD, suggests an approach for the military given its current shortfalls.

The directive states,

Develop a process to facilitate information sharing for stability operations among the DOD Components, and relevant US Departments, and Agencies, foreign government and security forces, International Organizations, NGOs, and members of the Private Sector while adequately protecting classified information and intelligence sources and methods.¹²

As an organization, the Army lacks expertise, training, equipment, and manning explicitly for economic development. However, through daily patrols and leader engagements, it can inform other relevant U.S. departments, agencies, foreign governments and its security forces, international organizations (IO), nongovernment organizations (NGO), and the private sector can benefit from information collected by the Soldiers.¹³

The military issued several revisions to its doctrine in the years following DODD and DODI 3000.05, implementing changes, in DOD policy, based on operations in Iraq and Afghanistan. The first such revision in 2008 changed the Army's operations manual, FM 3-0 and subsequently, FM 3-07, *Stability Operations*. However, since the release of DODI 3000.05 in 2009, FM 3-07 has remained unchanged, while FM 3-0 was updated in 2011.

FM 3-07 echoed much of the policy dictated in DODD 3000.05. For the Army, the FM established "supporting economic and infrastructural development" as a primary stability task."¹⁴ The manual detailed the importance of economic development in regard to stability operations and maintained that the Army plays a significant role at the local level, supporting economic stabilization, and promoting further economic stability at the national level.

FM 3-07 suggests that the military execute economic development activities with vigilance so as not to create unintended long-term, negative consequences.¹⁵ For

example, units may occupy an area of operation and immediately start executing projects to improve infrastructure and the economy. Doing so brings jobs and circulates capital into the local market that was previously nonexistent, leading to unintended consequences such as hyperinflation. Although FM 3-07 informs the military professional of the importance of supporting economic and infrastructure development, it also highlights development's complexity.

Economic development is complex in that it is not only affected by other economic and noneconomic variables, but it affects other variables as well. Consequently, FM 3-07 supports DOD 3000.05's claim that the military lacks expertise in Stability Operations (a shortfall that the military recognizes). It acknowledges that it must rely on other USG agencies, and organizations.¹⁶ These organizations complement the Army by bringing all instruments of national power to bear and facilitating a "whole-of-government" (WOG) approach.

One of the important documents that FM 3-07 briefly touches is the DOS's essential task matrix (ETM) for stabilization. While brief in the FM, further examination of the DOS's ETM (in its entirety) reveals a detailed list of tasks that should be considered by the military and the DOS in their planning. The ETM is an extensive document listing broad aspects of an economy that need to be assessed, and subsequently what needs to be accomplished by an organization (the military or DOS), by phase, in order to stabilize an economy.¹⁷

Although some tasks are simple enough for most Army units to execute, the majority of the ETM prescribes tasks to be executed that span beyond the expertise of most units, if not the Army in general. One such example is the task "initiate immediate

capacity in Central Bank to conduct essential Central Bank operations.”¹⁸ Such tasks require the expertise beyond the inherent capabilities of units such as an Infantry brigade, and perhaps the Army. Such expertise may exist (although limited) in specialized units such as CA Brigades, but more likely from within the DOS, S/CRS, or other government agencies.

In 2010, Joint Forces Command (JFCOM) released its *Handbook for Military Support to Economic Stabilization*. While not an approved doctrine, the handbook attempts to expand on previous doctrine (including Army doctrine) and implement interagency expertise. The handbook is more specific than the ETM as to what organization is preferred to conduct a particular economic stabilization task, but it still not a tool designed for tactical commanders (commanders at the brigade and below) without economics expertise. In fact, the handbook says “it is often important to make sure the staff has access to even more focused level of expertise, as required. For example, the staff may need experts in economic planning, assessment, collection, economic data interpretation.”¹⁹

Since FM 3-07, three other National policy documents were released with regard to economic development. The DOD released its *Quadrennial Defense Review (QDR)* in the beginning of 2010, the Presidential Policy Directive on Global Development (PPD) in September of 2010, and the DOS’s Quadrennial Diplomacy and Development Review at the end of the year.

The *QDR* further establishes the DOD’s commitment to development and acknowledges that the DOD’s involvement in development is not limited to conflicts in Iraq and Afghanistan, but throughout the world.²⁰ The policy makes the prediction that

the department's role in development is that of deterrence against the rise of threat against the United States. The policy also recognizes the toll Operation Iraq Freedom, New Dawn, and Enduring Freedom have had on Civil Affairs (CA) professionals, and commits to increasing the capacity of those professions to better support current and future operations.

While increasing the availability of CA professions with expertise in governance, economic development, and others areas like rule of law is helpful, effective development would still require the participation of the greater military; however, the QDR, does not specify a specific role for remainder of non-CA military at large. More soldiers with expertise in fields such as economic development would assist commanders in understanding the environment and digest the suppositions of experts, but still requires the greater numbers of soldiers on patrol to gather the information needed for analysis by these experts.

The PPD on Global Development and the ensuing QDDR make sweeping changes to how the USG conducts development. The PPD acknowledges the inefficiencies of development in the past and seeks to correct it by establishing a new model that calls for sustainable development, holding recipient countries accountable for misuse of aid and rewarding recipient countries by empowering them with more assistance.²¹ Furthermore, the policy acknowledges future budget challenges by increasing the USG's selectivity on where development money is spent.

Despite budgetary challenges ahead, the PPD strengthens the resolve of development efforts in stabilization and post crisis situations to the context of the challenges." It further states that it will,

Foster the integration of capabilities needed to address complex security environments. The United States will seek an enhanced level of interagency cooperation in complex security environments by providing strong incentives for the design of common analysis, planning, and programs that draw upon the distinct perspectives and expertise of different U.S. Agencies.²²

This study supports the objects in this policy by posting a way military professionals may contribute to development in a way that maximizes collaboration with other government agencies and experts by understanding how they view development while operating within a way the Army understands (through its existing systems).

Released shortly after the PPD on Global Development, the QDDR echoes much of what is said the presidential policy. The QDDR was the first DOS policy of its kind, modeled after the DOD's QDR. The QDDR recognizes the call for a Unified Action, WOG approach. However, the DOS, particularly USAID, have already implemented programs to strengthen its working relationships with other government agency. For example, the District Stability Framework (DSF) (discussed later in this chapter), created by its military affairs office, was created specifically to be compatible with military forces.

Although the DOS has made great strides to increase its collaboration and compatibility with other government organizations, the QDDR paints a somewhat dismal picture of the current state of the DOS as being overstretched.²³ However, attempts have been made, such as budgeting (albeit insufficient for their role), to improve the capacity of the DOS. While growing in capacity, the near future illumines the DOS as a department who increasingly will have to rely on organizations such as the DOD, particularly the Army, to provide information that assists the department in targeting high-payoff development while operating under budgeting and personnel constraints.

FM 3-0, *Operations*, the Army's capstone manual, emphasizes that defeating the enemy in current and future conflicts require all instruments of national power—diplomatic, informational, military, and economic (DIME).²⁴ Historically, the U.S. military has been the lone organization on the ground. Therefore, as an organization it needs to understand how to integrate, support, and empower other instruments of national power “to such time that it may transition the lead of such responsibilities to other agencies.”²⁵ Although current doctrine places economics in the context of other instruments of national power, it narrowly suggests how the Army contributes to economic development.

Alternatively, FM 3-0 does suggest a way for the military professional to put economic development into perspective using a framework of specific operational variable identified as political, military, economic, social, infrastructure, information, the physical environment, and time (PMESII-PT).²⁶ This framework is simply a way to see information in an arranged fashion. PMESII-PT does capture important aspects of an operational environment, but does not provide the detail for true understanding of the operating environment. When developed, PMESII-PT may highlight points of intervention and possible tasks to undertake with little risk of negative unintended consequences. But how does the Army better develop PMESII-PT and generate better understanding of the operating environment?

Although not specific to economic development, a further examination of FM 3-0 uncovers a foundation for which an effective contribution to economic development may occur. The FM and its accompanying FM 5-0, *The Operations Process*, introduces the operations process as a way to plan, prepare, assess, and execute operations and design, a

methodology to understand, visualize, describe the operational environment. It also describes the adoption of PMESII-PT and mission command—commanders’ application of operational art and science.²⁷ Mission command is how the Army conducts command and control, relying on subordinates having a clear understanding of the commander’s intent, affording subordinate commander flexibility, and rapid decision making in complex environments. An overview of design will be given in section 3, and further analyzed in chapter 4. Design suggests a way for military professionals to participate effectively in economic development while not making a complete departure from doctrine.

The policy body of literature has informed this study on clear outcomes the USG expects from economic development, regardless of who executes it. Policy directs all USG organizations to be collaborative in nature, setting the stage for creating compatibilities in systems each USG organization employs for planning and execution of economic development. At the same time policy attempts reduce legacy obstacles caused by differences in organizational culture.

Doctrine, while dated compared to recent policy, suggests existing tools already available to military professionals may be used to comply with policy. It is limited in detail as to how the Army specifically contributes to economic development; however, existing methodology such as design, suggests a way for the military professional to contribute effectively to economic development given its limited expertise, and while being collaborative and compatible with other government agencies. On the other hand, the DOS’s ETM, and JFCOM’s *Handbook for Military Support to Economic Stabilization* is a trove for extracting economic development variables and for insight as

to how the DOS envisions economic development in a post-conflict environment; however, both require that the user of the matrix have familiarity with, or expertise in economic development for it to be effective.

Section 2: Influential Scholars

The Influential Scholars body of literature builds on the previous sections in order to add depth to what may inform economic development. This body of literature highlighted the ongoing exchange between scholars and served as another point of departure for further study. The literature herein continues to build on being able to inform design with input gleaned from prominent scholars in the field of economic development.

One of the prominent debates on economic development is between Dr. Jeffrey Sachs, and Dr. William Easterly. Sachs is a world-renowned scholar made popular with his involvement on the transition of the former Soviet Union from a communist to a free-market system. He was one of the youngest professors at Harvard and served as Special Advisor to U.N. Secretary Kofi Annan. He now serves as Director of the Earth Institute at Columbia University and Quetelet Professor of Sustainable Development.

Sachs argues that effective economic development in some countries is especially difficult because they are poor to begin with and do not have capital or a means to obtain it.²⁸ He defines different kinds of capital as human, investment, infrastructure, environmental, and institutional. He infers that in order for economic development to be effective—particularly in impoverished countries—surplus of each form of capital is required in order for growth to occur.²⁹ When people are struggling to survive, they spend what little capital they have, leaving no time to build any of the other forms of

capital. Furthermore, Sachs offers an extensive list of reasons countries develop or under develop. Some examples he includes are geography (natural resource laden countries versus land-locked countries and culture) cultural attitudes or practices that may drive conflict or rivalries, and governance—the effects of decisions by lawmakers or others in charge.

Sachs argues that there is no template for economic development that can be applied the same to many countries. Instead, specific investments need to be made based on a countries specific capital shortage (e.g., infrastructure or investment capital). He concludes in his book, *The End of Poverty*, that rich countries can eliminate poverty if they invest in five specific areas: agriculture, health, education, power and communications, and water and sanitation.³⁰

Dr. William Easterly gives a contrasting view to Sachs. Easterly is an Economics Professor at New York University, Senior Fellow at the Brookings Institute in Washington, DC and author of the book, *White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*. He contends that the West's traditional, “top-down” approach, an approach that Sachs advocates, does not work and recommends other experimental and creative ways to approach economic development.³¹

Easterly, like Collier, a former World Bank Economist, contends that since the 1950s over \$2.3 trillion dollars in aid money have been sent to Africa without a significant positive change in GDP.³²

Easterly criticizes top-down planners like Sachs by arguing that transitioning the former Soviet Union from communism to a free-market system without ensuring that proper mechanisms were in place, such as property rights, created more of a “flea-market

system” and not a free-market system. Additionally, Easterly likens the top-down approach to a “new imperialism,” where large development agencies, such as USAID and the World Bank, continue to push development on poor countries with what they think is important and with little or no feedback as to what really works.

Easterly does not suggest the dismantling of large economic development agencies. Rather, he argues that they should change their habits. He contends that they should look from the bottom-up, with many little solutions rather than overarching, big solutions. In his book, released in 2006, Easterly broadly criticizes operations in Iraq as another example of a failed top-down approach. However, the 2005 DODI 3000.05 states that the DOD will “revive or build the private sector, including encouraging citizen-driven, bottom-up economic activity and constructing necessary infrastructure.”³³ While this may buttress Easterly’s advocacy for bottom-up development, it only illuminates the complexity of economic development as the FM 3-07 did. What can be gathered from Easterly’s work is that both a bottom-up and top-down approach may work when applied correctly and timely.

One example illustrating Easterly’s call for a bottom-up “experimental and creative approach” to economic development is the work of Dr. Muhammad Yunus, a scholar whose work with micro-finance and his Grameen Bank earned him the Nobel Peace Prize in 2006. Yunus introduced a novel concept: providing small loans, primarily to women, to fund economic growth at the village level.³⁴ He kept debt small and manageable and primarily loaned to women. He argued that women use the money for items of utility and taking care of the family, whereas men used extra money on themselves.

Yunus suggests that there are four kinds of organizations or organizational philosophies involved with economic development in developing and poverty stricken countries: government, nonprofits, multi-laterals, and corporate-social responsibilities.³⁵ He argues that these organizations and organizational philosophies suffer from corruption, inefficiencies, and greed. He also claims that they abandon the people who need help when the security situation does not favor the organizations' presence (i.e., leaving those in need, when they need it most).

As an alternative, Yunus makes the case for "social businesses." He argues that social businesses are neither charity nor government.³⁶ Consequently, like businesses, profit is a necessity; however, unlike businesses, social benefit is its goal. This philosophy, he contends, creates ownership, is sustainable, and because it reinvests its profits in society, helps lift people out of poverty. Yunus' approach may encourage more effective and creative use of funds within the military's "Money as a Weapon System" (MAAWS).

Another influential scholar in economic development is Dr. Paul Collier. Collier's expertise is in the area of development economics and conflict. He has studied the effects of economic development in Africa at length, and served as a director of the Development Research Group at the World Bank. Currently, he is a Professor of Economics and Director for the Center for the study of African economies at Oxford University. Unlike Sachs and Easterly, Collier recognizes the value of economic development from both a top-down and bottom-up approach.

Collier views the problems in economic development as being a function of one in four principle traps he calls, the conflict trap, natural resource trap, the land locked

with bad neighbors trap, and finally, the bad governance trap.³⁷ While placing countries in one, or a combination of these traps, Collier places economic development in a context that allows the professional to better frame the problems, identifying solutions and possible points of intervention. However, he also posits that effective solutions, whatever they may be, should come from within.

For example, in a conflict trap, Collier posits a correlation with conflict and the state of an economy. Low income, combined with lucrative natural resources and slow growth, elevate the chances of instability and promotes conflict.³⁸ Moreover, he argues that once conflict begins, the state of the economy fuels conflict, and conflict itself keeps an economy from growing, creating a vicious cycle. Based on this context, a security-based development solution may emerge such as funding and training larger security forces where a country benefits from both increased security capacity and more opportunities for employment.

Understanding how influential scholars view problems, and the solutions they posit, allowed this study to be used to gain an understanding of what variables soldiers will need to gather to feed the analysis by these experts. Chapter 4 goes into detail of what these scholars posit and attempt to extract, although not an all-inclusive list, of simple variables soldiers may gather. This simplification is a way for the Army to contribute to economic development within its capabilities and limited expertise. These scholars or other experts, in return, may analyze these variables and posit informed solutions.

Section 3: Methodology, Frameworks, and Theories

The frameworks, methodologies, and theories body of literature broadly informed the study of the tools available to military professionals for contributing to economic development. The body of literature briefly covers the Army's design methodology, CSO's Interagency Conflict Assessment Framework (ICAF), USAID's District Stability Framework, Linear-Stages of Growth Theory, and Structural-Change Theory. Chapter 4 will cover these frameworks, methodology, and theories in detail insofar as to meet the aim of this study.

Operational Design, or Design, originally introduced in FM 5-0 in 2010, is a methodology adopted by the Army to synergize creative and critical thinking and “understand, visualize, describe, and direct complex, ill-structured problems and develop approaches to solve them.”³⁹ Design is one way to further develop PMESII-PT and increase situational understanding of the operating environment.

Design is continuous, and iterative throughout the spectrum of the operations process.⁴⁰ According to FM 5-0, Design has four “concrete” goals—to understand ill-structured problems, anticipate change, create opportunities, and recognize and manage transitions. These goals are in keeping with what is required to address the challenges posed by the Army contributing to economic development. Once these goals are achieved, FM 5-0 suggests that a commander can use reasoning and logic to drive detailed planning more effectively.

In order to produce a Design concept that is actionable (detailed in chapter 4), FM 5-0 suggests that the end user answer three questions: (1) what is the context of where Design will be applied? (2) What problem is Design intended to solve? (3) What broad,

general approach will solve the problem?⁴¹ Figure 1 summarizes these questions as the problem frame, environmental frame, and the operational approach.

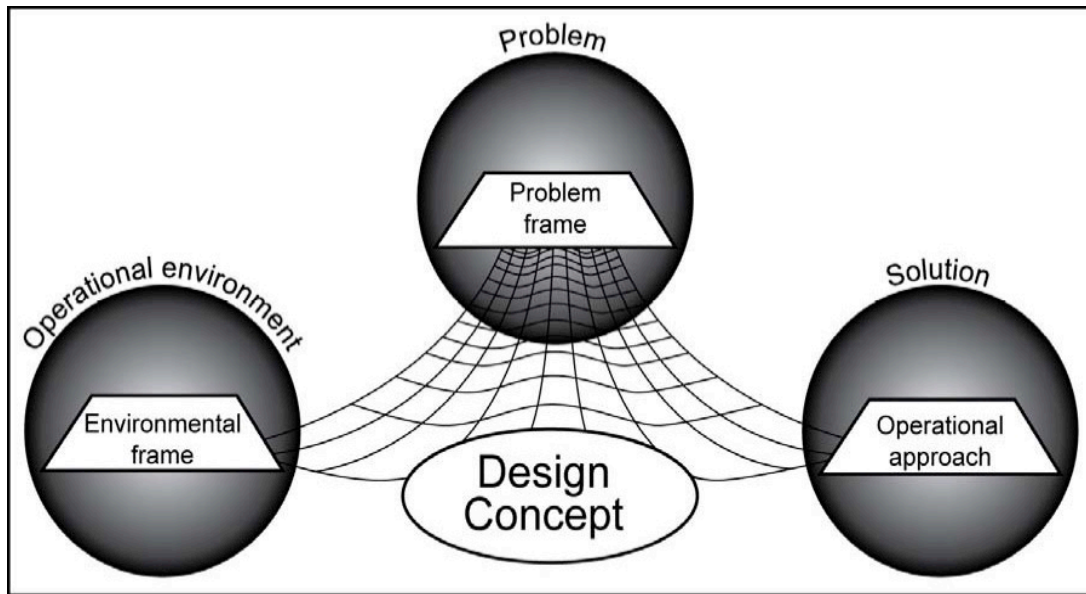


Figure 1. Design

Source: Department of the Army, Field Manual (FM) 5-0, *The Operations Process* (Washington, DC: Government Printing Office, 2010), 3-7.

Another tool that informs this study is the ICAF, developed by the CSO. ICAF is an interagency tool for “framing the environment” and was designed by then S/CRS as a systematic and theory-grounded approach to assess conflict.⁴² The purpose of the ICAF is to develop a common operating picture within other relevant government agencies. ICAF does not explicitly discuss economic development, but does support many of the scholarly suggestions of establishing a context.

Unlike Design, the ICAF is a bit more prescribed and follows a four-step process. In step one, a planning team determines and evaluates a context of the conflict.⁴³ Step

two prescribes an interview-like process where a planning team attempts to understand core grievances and institutional resilience. Step three identifies particular drivers of conflict and attempts to determine mitigating factors. Like the IAD model that follows, this step also identifies key actors their objectives and resources. While ICAF and design are similar, the ICAF components require further analysis (chapter 4), to translate its input and output into fruitful information for Army operations and economic development.

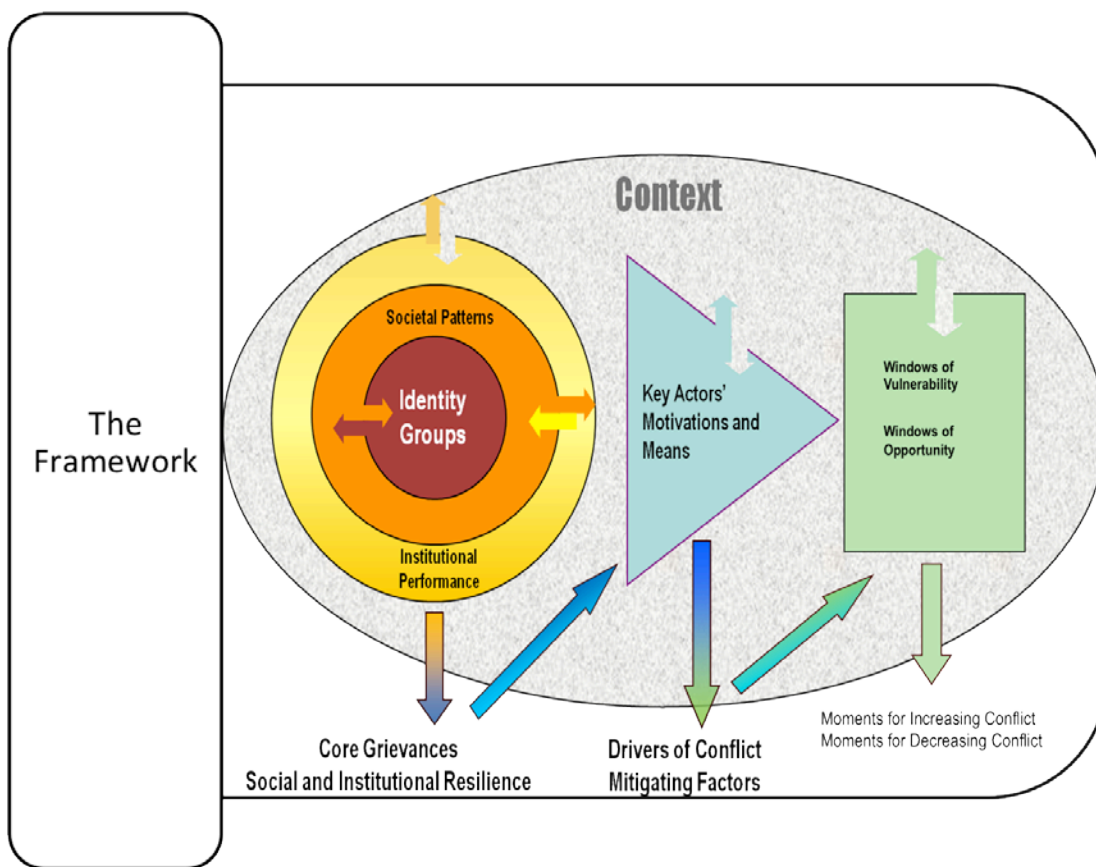


Figure 2. Interagency Conflict Assessment Framework

Source: Nicole Goodrich, "What is the Interagency Conflict Assessment Framework?" (Class Lecture, Local Dynamics of War, Command and General Staff College, Fort Leavenworth, February 8, 2012).



Figure 3. District Stability Framework

Source: Peacekeeping and Stability Operations Institute, “District Stability Operations Quick Reference Guide,” https://www.pksoi.org/document_repository/misc/DSF_Quick_Reference_Guide_Dec_2010-COP-239.pdf (accessed April 24, 2012).

In their book, *The Samaritan’s Dilemma*, Ostrom, Andersson, Clark, and Shivakumar, support Collier’s concept of placing economic development into a context before suggesting solutions. However, contrary to Collier, the context used is in broader terms and consists of attributes of a community, physical and material conditions, and rules-in-use.⁴⁴ They developed a framework that (much like the Army’s *Design*) allowed them to use other various economic tools such as, but not limited to, game theory, information theory, and common-resource pool theory.

Like Collier, Ostrom et al. findings are not tied a particular type of development. Rather they focus on its end-state and efficiency (or lack thereof). Whether it is top-down or bottom-up planned, they infer that efficient development is determined by structuring evaluations using a framework to improve outcomes.⁴⁵ They call this the Institutional

Analysis and Development (IAD) framework. A diagram overview of this framework is given in figure 4 and then dissected and analyzed in chapter 4 of this paper.

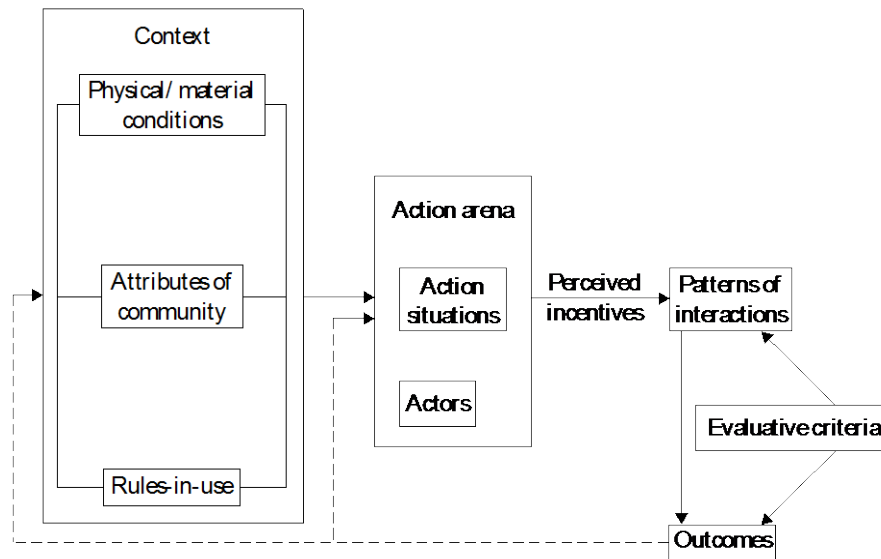


Figure 4. IAD Framework

Source: Clark C. Gibson, Elinor Ostrom, Krister Andersson, and Sujai Shivakumar, *The Samaritan's Dilemma: The Political Economy of Development Aid* (New York: Oxford University Press, 2005).

The Linear-Stages-of-Growth theory, as advocated by Walt W. Rostow in his 1960s book, *The Economic Stages of Growth: A Noncommunist Manifesto*, is a significant economic development model because of its maturity and widely accepted use. Although debated by scholars like Easterly, Rostow's model has spawned much fruitful discussion leading to other developments in economic development for over 40 years.⁴⁶

Rostow, a staunch anti-communist, developed his model after Marx's stage theory of development model. In his model, Rostow prescribes five stages of growth during

economic development.⁴⁷ They are the traditional society, the preconditions, for takeoff, the drive to maturity, and the age of high-mass consumption. He argues that a significant amount of capital is needed to spur growth and economic development. One such recommendation is through an accelerated accumulation of capital through international and domestic savings to spur investments. Where the model falls short is its failure to recommend measures of effectiveness for the transition from phase to phase. The implications for the military professional are that using such a model would require continuous monitoring of economic conditions with the support of experts. Furthermore, the model would require additional variables derived from other models or theories.

Porter offers a more recent model called the four stages of national competitive development. In his model, he looks at the development economy as being in one of four stages, factor, investment, innovation, and wealth driven.⁴⁸ Porter claims that this model provides a way to understand how economies develop. Like Rostow's model, it portrays the problems a nation faces in a given point in time and what makes it grow or fail.

According to Porter, factor-driven nations are economically driven by what he calls "basic factors of production," this includes but is not limited to, natural resources, or an inexpensive semiskilled labor pool.⁴⁹ Next, he describes investment-driven nations as having an economy willing and able to invest aggressively. One example he gives is the ability for a country to invest in building large-scale facilities comparable with those in the global market. Innovation-driven countries have a diverse range of industries and have the ability to successfully compete globally in certain sectors.⁵⁰ Finally, Porter describes the fourth stage of an economy as wealth driven. Porter argues, that while the wealth-driven stage is a goal for most countries, it is also a sign of decline. In other

words, countries in this phase are in equilibrium, which could in turn lead to atrophy.⁵¹

Porter sees this primarily as an incentives problem, meaning, managers, investors, and other stakeholders of an economy have no incentive to grow because wealth has already been achieved.

As with Rostow's model, correctly identifying what stage a country currently is in will illuminate certain economic solutions. Specific variable will be identified in chapter 4 that soldiers may collect that experts using Porter's model may use to posit solutions the Army may help implement or continue to inform.

Understanding the frameworks used by experts (scholars and other government agencies) informs the study on how it proceeds with contributing to economic development in a way that is not a complete departure to Army Doctrine, but also ensures compatibility with how experts view economic development. Design suggests a way for the Army to participate effectively in economic development while not making a complete departure from doctrine and ensuring compatibility with other agencies and their planning tools or frameworks.

Overall, this literature review informed the study of the relevant policies and doctrine that direct and inform the Army on economic development in Stability Operations. The doctrine also provided a start point and the existing foundation from which this study can build. Policy and doctrine are followed by the suppositions made by influential scholars in the economic development field and illuminates a source from which to extract variables for the study's conceptual framework. Finally, it concluded with informing the study of an operational framework to proceed with developing and extracting of data for the research

In the next chapter, Chapter 3, Research Methodology—the conceptual framework determined during the literature review will be described. Chapter 4, Analysis, will present the data collected and the research questions answered. Finally, Chapter 5, provides recommendations for implementation of the findings of this study and future research.

¹Coles, Weinberg, and Center of Military History.

²Anderson and Wallen, 2.

³Ibid.

⁴Coles, Weinberg, and Center of Military History.

⁵Office of the President of the United States.

⁶Ibid.

⁷Anderson and Wallen, 101.

⁸Department of Defense, *Department of Defense Directive 3000.05, Stability Operations*, 2005, 2.

⁹Schake, 201.

¹⁰Ibid.

¹¹Department of Defense, *Department of Defense Directive 3000.05, Stability Operations*, 2005.

¹²Ibid., 5.

¹³Anderson and Wallen, 103; Peterson, 228.

¹⁴Department of the Army, FM 3-07, *Stability Operations*, 2-12.

¹⁵Ibid., 3-14.

¹⁶Ibid., 6-2.

¹⁷Department of State, Office of the Coordinator for Reconstruction Stabilization, *Post-Conflict Reconstruction Essential Tasks* (Washington, DC: Office of the Coordinator for Reconstruction and Stabilization, U.S. Dept. of State, 2005).

¹⁸*Ibid.*, IV-1.

¹⁹Joint Forces Command, *Handbook for Military Support to Economic Stabilization* (Washington, DC: U.S. Government Printing Office, 2010), I-4.

²⁰Department of Defense, *Quadrennial Defense Review Report*, 2010.

²¹Office of the President of the United States, *Fact Sheet: U.S. Global Development Policy*, 2010.

²²*Ibid.*

²³Department of State, *Quadrennial Diplomacy and Development Review*, 2010.

²⁴Department of the Army, FM 3-0, *Operations*, ix.

²⁵Anderson and Wallen; Peter Campbell and others, “Converging Development: Economic Development in Post-Conflict Environments,” (2010); Coles, Weinberg, and Center of Military History; United States Office of the Special Inspector General for Iraq.

²⁶Department of the Army, FM 3-0, *Operations*, 1-5.

²⁷*Ibid.*

²⁸Jeffrey Sachs, *The End of Poverty : Economic Possibilities for Our Time* (New York: Penguin Press, 2005).

²⁹*Ibid.*

³⁰*Ibid.*

³¹William Easterly, *The White Man’s Burden: Why the West’s Efforts to Aid the Rest Have Done So Much Ill and So Little Good* (New York: Penguin Press, 2006).

³²*Ibid.*

³³Department of Defense, *Department of Defense Directive 3000.05, Stability Operations*.

³⁴Muhammad Yunus and Ray Porter, *Banker to the Poor [Micro-Lending and the Battle against World Poverty]* (Ashland, OR: Blackstone Audiobooks).

³⁵Muhammad Yunus, *Creating a World without Poverty: Social Business and the Future of Capitalism* (Public Affairs, 2007).

³⁶*Ibid.*

³⁷Paul Collier and Bank World, *Breaking the Conflict Trap : Civil War and Development Policy* (Washington, DC; [New York]: World Bank; Oxford University Press, 2003).

³⁸*Ibid.*

³⁹Department of the Army, FM 5-0, *The Operations Process*, 3-1.

⁴⁰*Ibid.*, 3-2.

⁴¹*Ibid.*, 3-7.

⁴²Department of State, Office of the Coordinator for Reconstruction Stabilization and others, *Interagency Conflict Assessment Framework* (Washington, DC: Office of the Coordinator for Reconstruction and Stabilization, U.S. Dept. of State, 2008).

⁴³*Ibid.*

⁴⁴*Ibid.*

⁴⁵Gibson et al., 4.

⁴⁶*Reinventing Foreign Aid* (Cambridge, MA: Massachussetts Institute of Technology, 2008).

⁴⁷Walt Rostow, *The Stages of Economic Growth* (Cambridge: Cambridge University Press, 1960).

⁴⁸Michael E. Porter, *The Competitive Advantage of Nations* (New York: The Free Press, 1990).

⁴⁹*Ibid.*, Location 10302.

⁵⁰*Ibid.*, Location 10405.

⁵¹*Ibid.*, Location 10468.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter includes a discussion of the research methodology used in order to answer the primary, secondary, and tertiary research questions of this study. The primary research question and the basis of this study determine how the Army can contribute effectively to economic development. Additionally, this chapter addresses how the secondary and tertiary research questions are answered: (1) is there a framework—a list of variables—that that Soldiers may use with little to no economic development expertise while also providing the commander with an initial understanding of the economy? and (2) how does the Army integrate these variables and framework into operations? Chapter 3 is organized into two sections, methodology, and validity.

The first section, methodology, is broken into two-parts, answering the secondary and tertiary questions. The first part discusses the steps involved in identifying variables that make the framework posited by this study. The second part outlines the steps taken to analyze how the Army conducts operations. The last section discusses how validity is maintained through the span of the study.

The first step of part 1 in this research method is to expand on work of Collier, Easterly, Yunus, Gibson et al., Rostow, and Porter. From these scholars, a base framework is established. Gibson et al. offers a simple definition of a framework as a way to organize necessary and relevant variables in order to analyze problems.¹ The IAD framework is used as a baseline. Other frameworks, such as the DSF, and ICAF were examined for commonality and for other types of variable not already included in the

IAD framework. If there is a deviation, and if relevant to economic development, the IAD is modified to form a new or refined framework.

Next, each scholar's view of the problems and solutions are juxtaposed to first determine factors of economic development. These factors of development were then classified into broad categories. Once all factors are identified and categorized, they are further reduced into simpler variables. These simple variables allow soldiers without economics expertise to ask simple questions that will inform experts on how to proceed with effective economic development.

Part 2 is an analysis of the Army operations process and design. It answers the tertiary research question: how does the Army integrate these variables and framework into operations. First, this analysis examines the operations process, which describes how the Army plans, prepares, and executes missions, and where design is implemented. Next, *Design* itself is examined to determine how the framework is applied. These steps are followed by the determination of how information flows between soldiers collecting information on the variables of the framework and the experts who analyze it and then send it back to the Army for execution.

Validity of the data used herein is made by the using data examined by a variety of scholars and theories throughout, molding the study to policy requirements, and maintaining adaptability of the study by using existing and relevant doctrine as a base. The study acknowledges that the list of variables are not all-inclusive, and therefore, can be tailored to fit specific experts, scholars, or other government or nongovernment organizations, that may participate with the Army in economic development. For example, as the literature alluded to, the Army is an organization without the specific

expertise for economic development; therefore, our requirement to collaborate with civilian organizations is necessary. Inherent in the Army's design methodology, are the mechanisms that allow the Army support and benefit from other government and nongovernment organizations to contribute to economic development; therefore, the use of design as a catalyst for economic development is in keeping with policy.²

This chapter detailed the methodology undertaken. It described how the data were broken down into two parts to allow for it to be systematically analyzed to answer the secondary, tertiary, and the primary research question, ultimately meeting the purpose of this study. Chapter 4, Analysis, follows the methodology laid out in Chapter 3, follows this chapter. Chapter 5, Conclusion, follows and provides recommendations for implementation of the findings of this study and future research.

¹Gibson et al., 25.

²Department of the Army, FM 5-0, *The Operations Process*, 3-1.

CHAPTER 4

ANALYSIS

This chapter is the analysis conducted to answer the primary research question on how the Army may effectively contribute economic development. As highlighted in the literature review, economic development is complex, and there is a gap in the literature on how the Army can specifically address this problem. The first section answers the secondary question, positing that there is a framework—a list of variables—that soldiers may use with little to no economic development expertise and provide the commander with an initial understanding of the economy. The second section answers the tertiary question, how the Army integrates these variables and framework into operations.

Section 1: The Framework and Variables

The analysis begins by establishing the base framework and then shaping the framework soldiers will use to collect economic information. For the base framework, I draw on Gibson et al. and Spengler, whose IAD framework and economic factors of economic development, are both similar in scope despite the latter being economic development specific. Although they label parts of their framework differently, they are (for the most part) similar in purpose, and are combined where noted.

The modified IAD framework allows the study to capture broad categories of economic development variables while also capturing the interaction between context (the economic environment) and what constitutes the Action Arena (described later). It allows the commander to gain some understanding of what is going on vis-à-vis economic development, but more importantly (and systematically) what variables need to

be collected to contribute to expert analysis (and in turn gain more understanding from expert feedback). This analysis describes the entire modified framework and its parts followed by describing (in detail) two scholar's view of economic development and how the variables in the modified IAD framework contribute to their analysis.

Gibson et al. describes a framework as a way to organize information to solve specific problems.¹ This modified version of the IAD framework combined with elements of Spengler's Economic Factors of Economic Development model was compared with and found compatible with USAID's DSF and DOS's ICAF. This framework posited in this study consists of two frames, Context and the Action Arena, or what Spengler calls the Environment of the Decision.² Figure 4 depicts the original IAD framework with all of its parts intact.

For the purpose of this part of the analysis, perceived incentives, patterns of interaction, evaluative criteria, and outcomes are eliminated. The modified framework is what will be used to (1) guide information collection efforts of soldiers, (2) give an initial understanding of economic development factors to commanders, and finally, (3) inform experts in a way compatible with a broad view of how economic development is analyzed. The parts of the IAD framework removed are discussed later because they are also inherent in design and the operations process. Later in this chapter, design is covered in-depth, and will explain how the Army supports economic development either directly, executing expert informed recommended solutions or indirectly, supporting other government or nongovernment agencies that specialize in economic development.

Within the *context* frame are three subcategories of data: the biophysical and material conditions, and what Spengler adds, physical agents of production, attributes of

the community, and lastly rules-in use (which may also be referred to as institutions).³ The purpose of the context is to establish the initial conditions, or economic environment, for which economic development is to occur; or as Gibson et al. puts it, and “structures efforts to produce outcomes.”⁴ For scholars such as Porter and Rostow, context is especially important as it portends much of what their models requires to be effective.

Although biophysical and material conditions, physical agents of labor, attributes of the community, and rules-in-use paint a picture of the context, they too may be broken down further into tiered levels of data. Higher-level data (1 is higher than 2) are broader and less specific while lower-level data are more specific and simpler to understand and collect. For example, financial institutions are considered level one (higher) data; under it would be level 2 (lower) data depicting types of financial institution (Public banks, securities institutions or commercial bank). Some variables may be broken down into multiple levels, but most will not exceed level 2. As soldiers become more informed and experienced in economic development, variables will not have to be broken down much further to develop questions that comprise variables in the framework. Generally, the lower the level of data, the easier it is to extract questions that soldiers may ask with little or no understanding of economic development.

Biophysical and material conditions are factors inherent in the environment that influence human decisions.⁵ For example, soil conditions that makes a region ripe for the cultivation of any income-producing crop. According to Gibson et al., characteristics of the biophysical and material world “produce incentives that affect the set of choices made.” To further their argument, they surmise that certain biophysical and material goods require certain institutions in place, in order for it to be managed and employed

effectively. Examples of level one biophysical and material data include, but are not limited to agricultural conditions, geographic location of the economic environment (e.g., land-locked countries, etc.). A partial list of data subcategorized into level 1, and where applicable, level 2 data, and associated questions are in figure 5, and comprehensive, albeit not all-inclusive example is in appendix A.

*This list of variables is not all-inclusive and may be shaped based on dialogue between specific civilian-military (civ-mil) relationships(e.g. USAID, Dr. Doe)
 *The questions herein are examples and may be refined based on unit preferences or experience, civ-mil relationships,
 *Some of these variable may be satisfied by observations, not requiring interviews during patrols or leader engagements

| Context (Economic Environment) Frame |
|---|
| Biophysical/Material Conditions Inflation -Price Index How much do you pay for X (where X is an item established as part of your basket of goods)? A basket of goods (staple items) may be established (e.g. bread, milk) with respective prices and periodically recorded to determine inflation (or deflation) Conditions for Agriculture -Arid How many crops per year may be produced? Do crops rely heavily on irrigation from an outside region, or is rainfall sufficient for that region? General observations by soldier may determine whether or not the area supports agriculture well The availability of farm equipment may also provide clues -Lush Are irrigation system's water source local or from elsewhere? General observations by soldier may determine whether or not the area supports agriculture well Is there a rainy season, and how long does it last? Natural Resource Availability -Ability to tap into it -Ability to store and distribute Geography -Access to ports Are there road systems that lead to air or sea ports? Are rivers or other bodies of water navigable and lead to sea ports? Industry -Diversified Is there a variety of businesses and can they be put into clusters (grouped by similar types of businesses)? -Agricultural Are there crops that are harvested in bulk and sold and shipped outside of the village, region, etc.? -Manufacturing Are there plants that assemble or create goods for the sake of resale? Public Utilities -Sewer -Water -Electric Do you have consistent power throughout the day and night? Where does your power come from? -Trash How do you dispose of trash? Is it collected and taken somewhere? -Telecommunications How do you communicate with distant relatives? Police, etc. Some indicators may be visually apparent like powerlines, satellite dishes, etc. Soldier need to inquire about the status of these systems (operational?). Public Health -Clinics -Hospital -Medical Evacuation (Ambulance Services) If someone is injured how to they get to a treatment facility? Where do you go if you are injured (need medical attention)? These questions are open ended and may answer all of the "Public Health" questions. Once identified, a follow assessment may be conducted. |

Figure 5. Example of level 1 and 2 data with associated question of the “Context” frame

Source: Created by author from Clark C. Gibson, Elinor Ostrom, Krister Andersson, and Sujai Shivakumar, *The Samaritan’s Dilemma: The Political Economy of Development Aid* (New York: Oxford University Press, 2005); Joseph J. Spengler, “Economic Factors in Economic Development,” *American Economic Association* 47, no. 2 (1957): 42-56.

The next subcategory of context is identifying the attributes of the community. This category is used to describe the population, culture, education, etc. These attributes, alone or in combination, affect an individual's ability to organize and may vary from different contexts.⁶ The more variables included in this subcategory, the greater the possible initial understanding of the economic environment. Scholars like Yunus may use variables collected in this subcategory to determine the feasibility of deploying micro-finance schemes in a given economic environment. However, they would benefit more by combining variables in other subcategories and the action situation frame, discussed later. Some examples of level one attributes of the community data include levels of education, technical education, culture, and industries. Further reduction of level 1 data to level 2 will lead to specific industries such as service, and manufacturing industries, etc. Attributes of a community are sometimes visually apparent to Soldiers on patrol. While passing through market places and town, they may gain a snapshot of goods available on the market, the number and type of educational or technical institutions, or of business clusters throughout an area of operation.

Another subcategory, one borrowed from Spengler and added to modify the IAD framework, is physical agents of labor. This subcategory, considered by Spengler as one of the most important to economic development, is also important to other scholars in this study. Data collected under physical agents of labor may be many things to other economist; however, for Spangler, it is a key indicator of technological implementation and its effects on labor, and thus, the current economic state of that region, state, or country. Examples of level 1 data in this subcategory include labor, population growth rate, productivity, employment, etc. Soldiers on patrol identify these variables by

inquiring about what jobs members of a household possesses (or not) or comparing the number of youth to middle-aged or elderly men.

Finally, the last subcategory of context is rules-in-use. The term *rules-in-use* describes shared understandings that a group of people have within organizational boundaries or communities that govern a certain kind of behavior.⁷ Rules may be written and formal, such as a city ordinance, or informal, generally accepted, or assumed, such as the etiquette expected in a fine-dining restaurant. Rules-in-use in economic development can vary depending on the sophistication of the area in which the framework is applied.

More sophisticated countries possess rules-in-use that are more formal and easily determined such as tax-code, or established market institutions such as a securities exchange, or courts (indicating some form of judicial law). Less sophisticated and developing countries have less obvious and informal rules-in-use. Instead of large or formal market places, they possess subdued, underground black markets. Instead of written law, they use generally accepted cultural habits for dispute resolution. Other examples of level 1 rules-in-use are financial and trade institutions, labor unions, etc.

Based on their particular model, Rostow and Porter may use variables of rule-of-use as a way to determine what stage of development a country is in and prescribe specific solutions in order for that country to progress to what they consider the next stage.⁸ Soldiers determine certain rules-in-use variables by asking members of the population about how land or businesses are regulated, or who collects various forms of rent (to determine tax systems in use, etc.).

All parts of the modified IAD framework, biophysical and material conditions, attributes of the community, physical agents of labor, and rules-in use, establish the

context or the economic environment. The economic environment sets the conditions for the dynamics of an action arena. Spengler would call the action arena, in specific economic development terms, “the environment of the decision.”⁹ Variables listed in context shape, or incentivize, individual or organizational choices within an action arena. Contexts that are thorough help commanders and others using the information collected better identify action arenas.¹⁰

| Context (Economic Environment) | |
|---|------------------------------------|
| Biophysical/Material Conditions | Physical Agents of Labor |
| Inflation | Labor |
| Conditions for Agriculture | Production Capacity |
| Natural Resource Availability | Forms of Capital |
| Geography (Land Locked) | |
| Industry | |
| Public Utilities | Rules-in-use (institutions) |
| Public Health | Rule-of-law |
| | Taxing Systems (Collection) |
| | Treasury System |
| | Enforcement of laws |
| | Cultural Based Rules |
| | Form of governance |
| Attributes of a Community | Financial Institution |
| Population | Trade Institutions |
| Ethnicity | Markets Institutions |
| Culture | Barter vs Cash |
| Religion | Corruption |
| Cultural Interaction within different ethnicities | Government Subsidies |
| Education levels | Trade Unions |
| Technical expertise | |
| Applied Technology | |
| History | |
| Ability to self organize | |
| Entrepreneurship | |
| Rivalries and Intensity | |
| Political Parties | |
| Income | |
| | |

Figure 6. Context (Economic Environment)

Source: Created by author from Clark C. Gibson, Elinor Ostrom, Krister Andersson, and Sujai Shivakumar, *The Samaritan’s Dilemma: The Political Economy of Development Aid* (New York: Oxford University Press, 2005); Joseph J. Spengler, “Economic Factors in Economic Development,” *American Economic Association* 47, no. 2 (1957): 42-56.

A number of action arenas may exist in an economic environment. The more detailed the context frame, the more action arenas are illuminated.¹¹ Within an action arena are two subcategories, actors or economic decision makers, and action situations. Action situations are derivatives of the economic environment and shape or incentivize an actor's decision-making or actions.

Actors (economic and noneconomic decision makers) within an action arena include individuals such as politicians, influential businessmen, or village elders. The economic environment shape how each of these actors makes and influence decisions.¹² However, actors are not limited to individuals and may include organizations or other groups of individuals who operate collectively. Large employers (corporate or not), partnerships, and trade unions are examples of actors operating within an action arena. Large employers have many implications. As economic decision makers, they are influential in that their decisions have impact on how variables in the economic environment, such as combining technological know-how and labor or other forms of capital, to increase or decrease production are employed.¹³

Relationships are built with economic actors through patrols and leader engagements to determine and report how actors plan, strategize, and allocate resources, time, money, and attention.¹⁴ Soldiers also seek to understand how actors value and process information, in addition to their decision-making processes, as well as other beliefs. Action situations enable commanders and others benefiting from information collected in the framework to better understand human actions and results. Gibson et al. suggests seven variables, as a starting point, to describe action situations within a given economic environment:

(1) The set of actors, (2) the set of specific positions to be filled by actors, (3) the set of allowable actions and their linkages to outcomes, (4) the potential outcomes that are linked to individual sequences of actions, (5) the level of control each actor has over choice, (6) the information available to actors about the structure of the action situation, and (7) the costs and benefits—which affect perceived incentives—assigned to actions and outcomes.¹⁵

| Action Arena |
|--|
| Action Situation |
| Entrepreneurship |
| Set of the Actors |
| Positions to be filled by actors |
| Allowable actions by positions |
| Outcomes of actions by a person in a particular position |
| Control an actor has over choice |
| Information available to actors about action situations |
| Cost and benefit which affect perceived incentives |
| Transparency of decisions |
| |
| Actors |
| Government |
| Non-Profits |
| Multi-laterals |
| Corporate Social Responsibility |
| Cultural men's role in economic decisions |
| Cultural Women's role in economic decisions |
| Beliefs |
| Information processing ability |
| How formulate plans/strategy |
| Time and resources to establish and maintain relationships |
| Commitment to keep promises |
| |

Figure 7. Action Arena

Source: Created by author from Clark C. Gibson, Elinor Ostrom, Krister Andersson, and Sujai Shivakumar, *The Samaritan's Dilemma: The Political Economy of Development Aid* (New York: Oxford University Press, 2005); Joseph J. Spengler, "Economic Factors in Economic Development," *American Economic Association* 47, no. 2 (1957): 42-56.

and the variables that comprise it against the information requirements scholars Collier and Sachs require for their analysis.

Collier categorizes how he views economies into four “traps.” They are conflict traps, natural resource traps, landlocked with bad neighbors trap, and bad governance in a small country trap.¹⁶ Collier believes that conflict is lucrative and that young males (anyone who can shoot a gun) find it as a way to keep busy, as well as a source of income to support the family. Thus, conflict traps are functions of population income and income growth rates, natural resources, and its exploitation by governments, etc. An analysis of variables collected by soldiers in the context and action arena frame, namely, natural resources, income, industries, education, and the incentives in an action situations inform Collier of the existence of a conflict trap. Variables collected by soldiers are not absolute; instead, they may be refined by dialogue between military professionals and experts.

Similar to conflict traps, “natural resource traps” involve the exploitation of natural resources, but not in a way in that it contributes to conflict. Rather, they depict natural resources, or its sudden discovery as agent to trade imbalances, inflation, or influx in the currency exchange rate. Framework variables used to determine conflict traps may be manipulated, different questions (related to similar variables) asked (or refined by experts), and may better inform such an economic development view. Sachs offers a different view on economic development and would benefit differently from how Collier would use variables this framework. One of his views, particularly on the poor and poverty, is that the extremely poor are the way they are because they began that way. They expend all available capital they possess just to make ends meet.¹⁷ The poor spend all of their resources and time in order to survive and lack the ability to produce much of

anything else. This is true not just for countries that are impoverished but also for countries recovering from conflict.

Sachs classifies capital as human, investment, infrastructure, environmental, and institutional capital.¹⁸ In order to inform scholars on the current state of the various forms of capital, Sachs may use variables determined in the economic environment frame, particularly under attributes of the community, physical agents of labor, and biophysical and material conditions subcategories.

According to Sachs, human capital includes a population's levels of education, technical skills, health care and availability of food. Many of these variables are listed in the attributes of community, and physical elements of labor subcategory. Moreover, for Sachs to understand the state of a country's institutional capital, which includes laws such as property right laws, and government institutions, he would benefit from variables collected in the rules-in-use subcategory. Furthermore, he would benefit from an initial assessment suggested by information collected in the action arena that may help illuminate existing incentives in place that may effect all other types of capital. However, capital and the ability to produce it are just some of the problems he sees. In order to suggest solutions for a given economy and its development, he lists what he considers common developmental problems.

Economic development is continual and dynamic; therefore, listing all of the common development problems Sachs posits is beyond the scope of this study. However, some problems that Sachs argues that illuminate whether or not this study's framework is sufficient are geography and failure to innovate. Geography may be simple to identify and is a function of being in the right (or wrong) place at the right time. Geographical

issues important to Sachs include the availability or access to ports, navigable rivers, soil quality, mountainous terrains, etc. Much of this information is discovered or supported by variables collected under the auspices of biophysical and material conditions. It asks soldiers to determine the state of public health (clinics, hospitals, and medical professionals), the availability of natural resources (oil, minerals, etc.) and conditions that foster agriculture (soil quality, climate, etc.). Understanding what Sachs calls “a failure to integrate,” require variables from multiple frames. Variables reported in the context frame such as levels of education and technical skills, may be combined with variables in the action arena (such as actors and their attributes, and the types of actors or economic decision makers that comprise an action arena).

This section covered the framework and its different frames, subcategories, and levels of data that comprise it. The framework helps military professionals organize and plan what economic development information is collected, it also paint an initial picture of economic development that eventually lead military professionals to situation understanding; however, it requires the scrutiny of experts working with the Army to fully understand the dynamics of economic development, and how to best contribute to or execute it. But how does the Army integrate this framework and its output into Army Operations? The answer lies in integrating the framework into the Army’s operations process through design methodology.

Section 2: Integrating the Variables and Framework into Operations

In operations, commanders face thinking and adaptive enemies, changing civilian perceptions and differing agendas of various organizations in an operational area. Commanders can never predict with certainty how enemies or civilians will act and react or how events may develop. Success in operations requires leaders to build, maintain, and revise their situational understanding throughout an

operation. Leaders must anticipate, learn, adapt, and manage transitions more effectively than their opponents.¹⁹

Effective contribution to economic development entail using the framework determined and suggested by this study and operationalizing it; in other words, integrated into operations. FM 5-0 says that commanders conduct operations, supported by their staffs, subordinate commanders, as well as other military and civilian partners through the implementation of design and the operations process.²⁰

As shown in the literature review, economic development is complex, requiring cooperation with experts from other government and nongovernment organizations with expertise. The operations process offered by FM 5-0 above, allow the implementation of this study's framework as way that inform these partnering experts. The dialogue and its resulting solutions support both the Army and its partnering civilian government and nongovernment organizations with a true WOG approach to affecting economic development. This section is an analysis of the operations process, centered on design, as a way of implementing the framework.

In order to understand design and its implications for implementing this study's framework, the operations process must be understood. The operations process is continuous, and consists of performing major command and control activities of planning, preparing, and executing.²¹ Assessment of these activities is constant throughout the process. As figure 8 shows, the commander is at the center of the operations process. He drives the operations process by understanding, visualizing, describing, directing, leading and assessing to accomplish missions.²² Economic development variables change constantly making the operations process and the iterative nature of design complimentary.

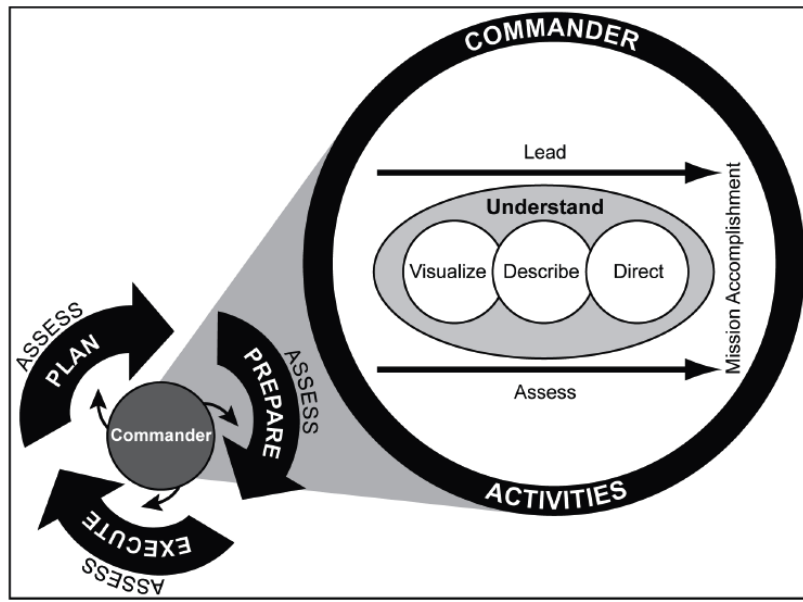


Figure 9. The Operations Process

Source: Department of the Army, FM 3-0, *Operations* (Washington, DC: Government Printing Office, 22 February 2011), 5-3.

FM 5-0 suggests that the preferred method for command and control is what it calls Mission Command.²³ In recognizing the complex nature of the operating environment the Army adopted the concept of mission command, requiring that commanders give more latitude to subordinate commanders, increasing their ability to adapt quickly to changes in the environment, exploit opportunities, and easily manage transitions and risks. Easterly recognizes the need for such qualities, perhaps implying that this latitude given to subordinates may feed solutions up the chain of command.²⁴

In order to implement mission command effectively, commanders require situation understanding.²⁵ Commanders seek situation understanding throughout the operations process. FM 5-0 describes situation understanding as being a product of “applying analysis and judgment to relevant information and knowledge to facilitate their

decision making.”²⁶ Due to the complex nature of economic development, the commander requires tools to help fill his gap in knowledge and inform judgment. *Design* was developed to assist the commander with this challenge (although not specifically for economic development). Perez, in an article entitled “A Practical Guide to Design,” said “*Design* provides commanders with a way to think about the dynamic factors at play in a world of irregularities, surprises, and fleeting opportunities.”²⁷

It is the spirit of design that makes it part of the solution that helps to implement the framework identified in the first section of this chapter and lead to the Army’s effective contribution to economic development. Design may be thought of as an open system that “exchanges matter, energy, or information with its environment.”²⁸ It is a methodology adopted by the Army that allows the commander to visualize, describe, and direct, ill-structured problems, and develop approaches to solve it.²⁹

As a complex and ill-structured problem, economic development requires cooperative and collaborative critical and creative thinking between Army and civilian government and nongovernment organizations. Critical thinking is continuous and reflective learning while creative thinking is a way of thinking in new and innovative ways.³⁰ Combining the work of several scholars in this study to create this framework is an attempt to combine both types of thinking. The framework through design, integrates well into the operations process because design organizes the activities of the commander in the operations process in way that allows dialogue between a commander and his staff and experts.

FM 5-0 suggests that design enables the commander to view the situation from multiple perspectives, draw on multiple and various sources of knowledge, leveraging

subject matter expertise (SME) while also increasing the commanders understanding of the economic environment.³¹ For example, the 25th infantry division economics working group understood the importance of leveraging experts, establishing relationships with government and nongovernment sources of expertise before their deployment to Operation Iraq Freedom in 2009.³² The framework posited in this study leverages SMEs by allowing Soldiers to collect information that is compatible with requirements of influential scholars for identifying economic development problems. The framework is not all-inclusive and can be molded to accommodate specific requirements depending on the Army's partner in any given operation. However, in its current state, it is meant to have the depth and breadth to allow for continuous analysis from multiple sources and SMEs. Moreover, this allows the Army to meet DOD requirements to

Facilitate information sharing for stability operations among the DOD Components, and relevant US Departments, and Agencies, foreign government and security forces, International Organizations, NGOs, and members of the Private Sector.³³

Economic variables' constant flux is well known. Soldiers constantly capture variables in the framework through daily patrols and key leader engagements. *Design* embraces this flux because it is iterative continuous throughout all activities of the operations process. Design evolves as the commander, staff, and its civilian partners increase their understanding.³⁴ As soldiers continue to feed the framework, this information is sent to SMEs for further analysis while simultaneously building the commander's own knowledge. As information is analyzed by SMEs and sent back to the commander he or she forms a deeper understanding of the economic situation and the operating environment at large. This process is managed using the methodology of design prescribed in FM 5-0.

Commanders apply design methodology using three frames, the environment frame, problem frame, and the operational approach frame (see figure 6).³⁵ The framework in this study works beautifully with these frame not requiring a commander and his staff to discern what information goes where and how. Variables in the context frame are modular and fit easily into the environmental frame. This gives the commander an initial understanding of the economic environment.

As soldiers continue to collect and refine variables in the framework, they also continue fuel the information requirements of experts, who contribute to the commander achieving a deeper understanding of the context or economic environment. As deeper understanding is achieved, commanders and experts also further develop the action situation frame, which subsequently informs the problem frame of the design methodology. It is through this deeper understanding, made possible by leveraging SMEs, and cooperating with other government and nongovernment organizations, that the commander may form his operations approach and transition from conceptual to detailed planning.³⁶

This chapter covered the framework created by this study for soldiers to organize and collect variables in a way that increases the commander's initial situation understanding, while informing experts in a way that they may offer advice and solutions that eventually lead to his deeper understanding of economic development and the operational environment at large. The chapter analyzed design and the operations process and highlighted how the framework integrates into Army operations with design as a catalyst. Chapter 5, follows this chapter and includes recommendations based on the findings of the study and recommended future study.

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- ¹Gibson et al., 25.
- ²Joesph J. Spengler, "Economic Factors in Economic Developement," *American Economic Association* 47, no. 2 (1957): 42-56.
- ³Gibson et al., 25.
- ⁴Ibid.
- ⁵Gibson et al., 34.
- ⁶Ibid., 35.
- ⁷Ibid., 33.
- ⁸Porter; Rostow.
- ⁹Spengler, 54.
- ¹⁰Gibson et al.
- ¹¹Ibid.
- ¹²Ibid.
- ¹³Paul Collier, *Wars, Guns, and Votes : Democracy in Dangerous Places* (New York: Harper, 2009); Sachs; Spengler.
- ¹⁴Gibson et al.
- ¹⁵Ibid.
- ¹⁶Paul Collier, *The Bottom Billion : Why the Poorest Countries Are Failing and What Can Be Done About It* (Oxford; New York: Oxford University Press, 2007).
- ¹⁷Sachs.
- ¹⁸Ibid.
- ¹⁹Department of the Army, FM 5-0, *The Operations Process*, vi.
- ²⁰Ibid.
- ²¹Ibid.
- ²²Ibid.

²³Ibid.

²⁴Easterly.

²⁵Department of the Army, FM 5-0, *The Operations Process*, vi.

²⁶Ibid.

²⁷Celestino Perez, “A Practical Guide to Design: A Way to Think About It, and a Way to Do It,” *Military Review* 92, no. 2 (March-April 2011): 41-51.

²⁸School of Advanced Military Studies, *Art of Design: Student Text 2.0*. (Washington, DC: Government Printing Office, 2010).

²⁹Department of the Army, FM 5-0, *The Operations Process*, 3-1.

³⁰Ibid.

³¹Ibid.

³²Lieutenant Colonel Nancy Blacker and Charlie Kim, Interview by Contemporary Operations Study Team, Combat Studies Institute, Fort Leavenworth, KS, 25 May 2010.

³³Department of Defense, *Department of Defense Directive 3000.05, Stability Operations*.

³⁴Department of the Army, FM 5-0, *The Operations Process*, 3-1.

³⁵Ibid., 3-7.

³⁶Detailed planning is when commanders (coupled with situation understanding), takes the broad approach identified and informed by design and the framework posited in this study, and translates it into a complete, executable, plan. Ibid.

CHAPTER 5

CONCLUSION

This study was drawn from the work of seven influential scholars and other government agencies with expertise in economic development, developed a framework military professionals may use to contribute effectively to economic development. By combining the work of these scholars and other government agencies, the findings of this study were integrated into the Army design methodology to operationalize the framework.

The findings of this study showed the Army can contribute effectively to economic development by leveraging experts (fueled by information gathered by soldiers) using the modified IAD framework, and integrates it into the operation using design. Figure 10 depicts the modified IAD framework integrated into Army design methodology. There are many frameworks, methodologies, models, and theories in existence, which continue to evolve with respect to economic development. The importance of the modified IAD framework, like its roots, is that it is open and adaptable.¹ The spirit of the framework is that it is evolving. It was created with the understanding that no one solution exists for economic development.

As the framework is fed by information gathered by soldiers, it builds basic situational understanding for the commander while also meeting the information requirements of experts (later yielding advice for deeper situational understanding or recommended solutions). The framework is organized and detailed, yet simple enough that soldiers may collect information without requiring expertise. It is important to understand that economic development and scholarly research behind it is constantly

evolving, and as it does so will the variables that make up the framework. As dialogue between experts and military professionals persist, the framework, coupled with design, help commanders at varying levels increase their own situational understanding, and thus extend their abilities to visualize, describe, direct, and lead operations involving economic development.²

By harnessing the advice and solutions offered by experts, commanders may determine (or be directed to) take a direct or indirect approach to economic development. A direct approach would be for a commander to undertake economic development on his or her own while being supported by experts (government or nongovernment organization). Another option is for the commander to take an indirect approach, or supporting role, where another government or nongovernment organization takes the lead. Here, the commander continues to inform economic development using the modified framework and design or becomes subordinate to another government organization such as USAID.

Regardless of whether or not a commander takes a direct or indirect approach to economic development, he and his staff (expertly informed) will have established evaluation criteria while monitoring patterns of interaction and outcomes.³ As these events occur, variables are monitored and change to the framework captured. This recurring iterative process is the feedback loop. Since design is iterative, the feedback loop is easily integrated into the operations process.

Like any type of operations the Army conducts, economic development requires familiarity that can only be obtained by periodic training. The importance of economic development, which is well highlighted throughout policy and doctrine, needs to be

emphasized in pre-deployment training, and continuously scrutinized well into a unit's deployment. Although the modified IAD framework posited in this study is meant to organize and simplify the gathering of economic data, the first time a commander and his staff see the framework should be well before it actually matters (e.g., deployment, culminating training events, etc.).

Not only is training for economic development and understanding the details of this framework important, but also knowledge about other organizations that will work in concert with the Army during operations is also important. The research suggested the use of the modified IAD framework and design as a way to leverage experts, but in order for the process to work, human interaction must occur and relationships with these experts and organizations established. Furthermore, units should strive to identify soldiers with specific expertise in the unit that relate to variables in the framework. These individuals provide a wealth of knowledge to the unit and make the framework more useful.

Understanding and integrating with these experts and other organization takes time that units do not have while deployed. These relationships should be established at a unit's earliest convenience. Once relationships have been established between the Army, experts and other organizations, the modified IAD framework can be refined and tailored to support these experts and other organizations (and in turn, the Army). The appreciation of economic development and its determining variables are no different than an appreciation for enemy order-of-battle and weapons capabilities and strength. They are all required to reach an end-state.

¹Gibson et al., 24.

²Department of the Army, FM 5-0, *The Operations Process*, 3-1.

³Gibson et al., 141.

APPENDIX A

CONTEXT FRAME EXAMPLE WITH LEVEL 1 AND 2 DATA

AND ASSOCIATED QUESTIONS

*This list of variables is not all inclusive and may be shaped based on dialogue between specific civilian-military (civ-mil) relationships(e.g. USAID, Dr. Doe)

*The questions herein are examples and may be refined based on unit preferences or experience, civ-mil relationships.

*Some of these variable may be satisfied by observations, not requiring interviews during patrols or leader engagements

| Context (Economic Environment) Frame |
|---|
| Biophysical/Material Conditions Inflation -Price Index How much do you pay for X (where X is an item established as part of your basket of goods)? A basket of goods (staple items) may be established (e.g. bread, rice) with respective prices and periodically recorded to determine inflation (or deflation) Conditions for Agriculture Arid How many crops per year may be produced? Do crops rely heavily on irrigation from an outside region, or is rainfall sufficient for that region? General observations by soldier may determine whether or not the area supports agriculture well The availability of farm equipment may also provide clues Lush Are irrigation system's water source local or from elsewhere? General observations by soldier may determine whether or not the area supports agriculture well Is there a rainy season, and how long does it last? Natural Resource Availability -Ability to tap into it -Ability to store and distribute Geography Access to ports Are there road systems that lead to air or sea ports? Are rivers or other bodies of water navigable and lead to sea ports? |
| Industry -Diversified Is there a variety of businesses and can they be put into clusters (grouped by similar types of businesses)? -Agricultural Are there crops that are harvested in bulk and sold and shipped outside of the village, region, etc.? -Manufacturing Are there plants that assemble or create goods for the sake of resale? |
| Public Utilities -Sewer -Water Electric: Do you have consistent power throughout the day and night? Where does your power come from? -Trash How do you dispose of trash? Is it collected and taken somewhere? -Telecommunications How do you communicate with distant relatives? Police, etc. Some indicators may be visually apparent like powerlines, satellite dishes, etc. Soldier need to inquire about the status of these systems (operational?). |
| Public Health -Clinics -Hospital -Medical Evacuation (Ambulance Services) If someone is injured how do they get to a treatment facility? Where do you go if you are injured (need medical attention)? These questions are open ended and may answer all of the "Public Health" questions. Once identified, a follow assessment may be conducted. |
| Attributes of a Community Population -Density -Sparse -Employment What do you do for a living? Questions on employment may also illuminate what kinds of industries are predominant in an area as well as who the large employers are (government, private sector). -Underemployment -What was your previous job and how is it compared to your current job? Pay comparison? -Income -What is your pay? What is your pay relative to pre-conflict? -After you pay for living (survival) expenses, do you have any savings left over? |
| Ethnicity -Mixed -Single Dominant -Minorities Culture -Cultural-men's role in economic decisions -Cultural-Women's role in economic decisions Who manages funds in the family? Who has final say in financial decisions in the family? |
| Religion Cultural interaction within different ethnicities |
| History -Historical Grievances -Historical Trade |
| Entrepreneurship Rivalries and Intensity Political Parties |

| | |
|---|--|
| Physical Agents of Labor | |
| Labor | |
| -Unskilled | |
| -Skilled | |
| -Labor Pool | |
| -Labor Pool-Immigration/Emmigration | |
| -Reliability of work force | |
| Production Capacity | |
| Other forms of Capital | |
| -Transportation | |
| How are goods transported from manufacturing or harvesting to markets (e.g. roads, rivers, train)? | |
| Applied Technology | |
| -Manufacturing | |
| -Agricultural | |
| Are advanced (relative to modern countries) equipment used in a particular industry present (e.g. machinery)? | |
| Education levels | |
| -Grade-School | |
| -Undergraduate | |
| -Master's or Doctoral | |
| Technical expertise | |
| -Construction | |
| -Electricians | |
| -Automotive | |
| Are there schools specialized in teaching specific technical expertise? | |
| How would you go about learning how to X (where X is a specific technical expertise)? | |
| Rules-in-use (institutions) | |
| Rule-of-law | |
| -Property Rights | |
| How do you handle property disputes? | |
| -Tax Law: | |
| Do you pay taxes? | |
| Who collects taxes? | |
| What happens if you do not pay your taxes? | |
| -Court System: When someone breaks the rules, how is it handled? | |
| Taxing Systems (Collection) | |
| Treasury System | |
| Enforcement of laws | |
| Cultural Based Rules | |
| Form of governance | |
| Financial Institution | |
| -Shop Credit | |
| -Micro-finance | |
| -Commercial Banking | |
| Trade Institutions | |
| Markets Institutions | |
| -Auction Systems | |
| -Securities Commission | |
| -Market System | |
| -Rationed | |
| -Centrally allocated | |
| -Black Markets | |
| Do markets provide you with what you need? If not where do you get it from? | |
| Barter vs Cash | |
| What do you use to pay for staple goods (e.g. rice, bread, etc.)? | |
| Corruption | |
| -Nepotism | |
| -Favoritism | |
| Where do you think tax collections go? | |
| Government Subsidies | |
| Trade Unions | |
| -Who looks out for your welfare at your place of work? | |

Text =Requires enduring, frequent reporting. Frequency may differ by environment (week, bi-weekly, monthly)

Text =Required enduring, periodic reporting. Frequency may differ by environment (monthly, quarterly, yearly)

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